ICRR External review 2019
May 16, 2019

Answers to questions

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New activities with "International Joint Usage / Research Center"

With the newly available budget (0.5-0.6 M$), ICRR is going to:

- Accepting proposals to the ICRR's Inter-University Research Programs from foreign collaborators. We essentially support travel expenses in Japan.
- Hiring 2 more Research Administrators. Their main duty is to support the foreign collaborators staying in Japan.
- Accepting more visiting professors. Essentially, the budget for visiting professors is doubled (from ~5 Myen to ~10 Myen).
- Supporting more young researchers. (One more post-doc per year. Now 5 new postdocs per year hired directly by ICRR.)
- Supporting big International conferences, if ICRR is going to host.

Educational activities for non-researcher careers

- To be honest, ICRR does not have special activity for the PhD course students to let them know the non-researcher careers.
- In the Physics department, there is a program called “ALPS” supported by MEXT. If a student is selected in this program, they have chances to work for several months in companies or other institutions. ICRR students can be selected in this program.

(Incomplete) Statistics…

	Graduated in FY2018	Graduated in FY 2014-16
Post doc	4 (all by JSPS)	4 (2 are foreign institutions)
faculty	0	0
companies	2	5
others	0	1 (local government)

Diversity

Scientific and Technical staffs (May 2018)

Profs	Associate profs	Research associates	Technical Staffs	Project profs[1]	Project Assoc. Profs.[1]	Project research associates[1]	Post-doc fellows	Total
9	15	18	8 +5	1	1	13	9 +4[2]	79
Female								
		2	1				1	4
Non-Japanese								
		1				2	2	5

Students (May 2018)

	Master course	PhD course	total
	34	37	71
Female	1	3	4
Non-Japanese	5	4	9

Responses to the Recommendations of the previous ICRR review (1)

1. Project selection: …… The committee urges ICRR to strengthen its (internal review of the Grant proposals) function further. In the proposal form of high-priority projects, the director may add a paragraph explaining why they have been given higher priority at ICRR. The discretionary funds and staff positions have to be allocated accordingly.

A: Since 2014(?), internal review of the Grant proposals have been reviewed by the Research Administrator, in addition to the external scientists.

In the Japanese Grant system, the director cannot comment on the proposals. However, the proposers use the ICRR external review report and the Future planning committee report to express the importance of the project. (In addition, in large project that are directly supported by MEXT, the director has been explaining the priorities of these projects.)

Due to the shrinking general operations budget for the Institute, the fanatical support to the projects is also shrinking. However, according to the position reallocation system of the Univ. of Tokyo, the director has been getting new positions to important projects.

Responses to the Recommendations of the previous ICRR review (2)

2. Engineering support: The committee notes that ICRR has significant disadvantage when compared with other comparable institutions outside Japan. Being in the Japanese university system, ICRR doesn't have job categories for high-level engineering and high-level technical works. The lack of such job categories has been supplemented partially by hard-working scientists and students. ……

A: Since about 10 years ago, ICRR always have been hiring new technical staffs who have Master or PhD degrees and who have the technical or experimental experiences. (Among the 8 permanent technical staffs, we have 3 PhD's (2 from U.Tokyo Physics) and 1 Master.)

Now U. Tokyo recognizes the importance of treating technical staffs properly. Therefore, now technical staffs have chances to be promoted to higher level position rather quickly. So ICRR have been proposing to approve the promotion of these highly educated technical staffs. So far, we have been rather successful.

Responses to the Recommendations of the previous ICRR review (2, cont'd)

2. Engineering support: …… The level of expertise required for KAGRA is much higher and cannot be supplemented in the same way. The Director may have to negotiate with MEXT and University of Tokyo to solve this issue. Even then it will be difficult to build up professional engineering in ICRR alone and will require close cooperation with co-hosting institutions and collaborating industry.

A: We have hired a super-expert on the vacuum system (who also has experiences in the management of large projects (accelerator construction)) as the Project professor. He is working as Project Manager of KAGRA. Also, we got the cross-appointment, associate professor position from the Univ. of Tokyo to hire the super-expert on large cryogenic system.

ICRR has been working together with NAOJ and KEK. KAGRA has been supported strongly by the Advance Technology Center of NAOJ and Cryogenic Center of KEK. Many of NAOJ and KEK colleagues actually live (or stay) in Kamioka.

Responses to the Recommendations of the previous ICRR review (2, cont'd-2)

Manpower of the KAGRA Observatory (visitors not included)

	As of May 2019	2013
Professor	2	2
Associate Prof.	3 + 0.5 (cross appointment)	2
Research Associate	1 + 0.5	2
Project Prof	1 + 0.2	--
Proj. Research Associate	2	1
Post doc	7	1
Senior researcher	1	--
Permanent technical staff	2 (with PhD)	--
Fixed term technical staffs	7	3
Administrative office	6	6
Research Administrator	0.5 (to support overseas collab. In Kamioka)	--
Public relation	1	---
Total	34.7	17

Most of them work in Kamioka but several of them work in Kashiwa (for computers and data analysis).

Responses to the Recommendations of the previous ICRR review (3)

3. Individual projects/programs: The committee reiterates that successful completion of KAGRA should be at the highest priority for ICRR until KAGRA will become operational in 2017-2018. For production of world-class scientific results, Super-K and T2K have to remain at the highest priority as long as they are the highest sensitivity neutrino experiments in the world.

A: Yes, the successful completion of KAGRA has been the highest priority. A lot of resources have been allocated to KAGRA.

Super-K and T2K have been the highest priority projects for the production of scientific results.

Responses to the Recommendations of the previous ICRR review (3, cont'd-1)

3. Individual projects/programs: The committee also recommends ICRR to remain involved in multiple world-class experimental high energy astrophysics and non-accelerator particle physics projects/programs. The proponents are strongly encouraged to continue their scientific efforts to produce highest-level scientific outputs.

A: Yes, ICRR followed the recommendation. TA is going to expand. Tibet As-gamma is just begin to release the new ~100TeV gamma ray results.

On the other hand, XMASS group stopped the data taking and joined the ZENON experiment.

Responses to the Recommendations of the previous ICRR review (3, cont'd-2)

3. Individual projects/programs: R&D efforts for the 2 future projects, CTA and Hyper-K, are well-advanced. The committee found that the level of funding and human resources required for Hyper-K is far beyond the current ICRR budget and man power and hence beyond the charge given to this committee. As for the CTA project, the committee believes that successful completion of the current CTA R&D will enable ICRR and Japanese CTA Consortium to build all Large Size Telescopes within the traditional funding level of ICRR. The challenge is coordination with the KAGRA funding schedule. Coordination within University of Tokyo, among co-hosting institutes, and related science communities will be required.

A: CTA is now the project stage.

The manpower for Hyper-K is effectively increased due to the new organization NNSO, because the HK collaborators in U.Tokyo but outside of ICRR are regarded as responsible for the construction. ICRR and U.Tokyo are working hard to get the government approval.

Responses to the Recommendations of the previous ICRR review (3, cont'd-3)

3. Individual projects/programs: The committee found that the near-future upgrades proposed by Tibet-γ and Telescope Array have important scientific merits and can be completed with a large Grant-in-Aid each. The Director and ICRR faculty have to be selective in requesting Grant-in-Aids, coordinate with the collaborating non-Japanese funding agents, and maximize the science outputs as mentioned in the previous subsections.

A: TA group received a large Grant and are now constructing TAx4. TA groups has been successful in coordinated Grant request: ICRR received largest Grant of JSPS and the group of Osaka City Univ. received the second largest Grant of JSPS.

Tibet AS-gamma is in the stage to produce new results on ~100 TeV gamma rays.

New organization for Hyper-K construction

- Motivation: MEXT evaluate Hyper-K highly. However at the same time, they pointed out that ICRR itself is too small to construct Hype-K. We have to find a solution.
- Our action: We decided to form a new organization in The University of Tokyo. At the same time, the president of The Univ. of Tokyo strongly encouraged the collaboration among the Research Institutes and Schools. So we formed “Next generation Neutrino Science Organization (NNSO)” in 2017.
  - In 2017, people from ICRR, Kavli-IPMU and School of Science are involved.
  - In 2018, people from Earth Research Institute joined.
- At the researchers level, people work for the preparation of Hyper-K.
- In addition, we have regular meetings of NNSO including representative from KEK and Japanese neutrino community.